

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

22 Lease Serial No. SF - 078051 078051

6. If Indian, Allottee or tribe Name

7. If Unit or CA Agreement, Name and No

8. Lease Name and Well No.

Well Com 2M  
Neal

9. API Well No.

30-045-31890

10. Field and Pool, or Exploratory

Basin Dakota & Blanco Mesaverde

11. Sec., T., R., M., or Blk, and survey or Area

G Sec. 14, T31N, R11W

12. County or Parish

San Juan

13. State

New Mexico

17. Spacing Unit dedicated to this well

320 E/2

20. BLM/BIA Bond No. on file

WY2924

23. Estimated duration

7 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Mary Corley

Name (Printed/typed)

Mary Corley

Date

09/11/2003

Title

Senior Regulatory Analyst

Approved by: David U. Mankiewicz

Name (Printed/Typed)

Date DEC - 4 2003

Title

Office

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct Operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

DRILLING OPERATIONS AUTHORIZED  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4

NMOC

District I  
1625 N. French Dr., Hobbs, NM 88240

District II  
811 South First, Artesia, NM 88210

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-102  
Revised August 15, 2000

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-045-31890</b>	<sup>2</sup> Pool Code <b>71599 &amp; 72319</b>	<sup>3</sup> Pool Name <b>Basin Dakota &amp; Blanco Mesaverde</b>
<sup>4</sup> Property Code <b>000920</b>	<sup>5</sup> Property Name <b>Neal Com</b>	<sup>6</sup> Well Number <b>2M</b>
<sup>7</sup> OGRID No. <b>000778</b>	<sup>8</sup> Operator Name <b>BP America Production Company</b>	<sup>9</sup> Elevation <b>5920 G1</b>

<sup>10</sup> Surface Location

UL or lot no. <b>Unit G</b>	Section <b>14</b>	Township <b>31N</b>	Range <b>11W</b>	Lot Idn	Feet from <b>2655</b>	North/South <b>North</b>	Feet from	East/West <b>East</b>	County <b>San Juan</b>
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet	East/West	County
<sup>12</sup> Dedicated Acres <b>320</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  <b>Mary Corley</b> Signature <b>Mary Corley</b> Printed Name <b>Sr. Regulatory Analyst</b> Title <b>11/03/2003</b> Date
	<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  <b>Revised 10/10/2003</b> Date of Survey Signature and Seal of Professional Surveyor:  <b>Gary D Vann 7016</b> Certificate Number

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0135  
Expires: November 30, 2000**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**5. Lease Serial No.  
NMSF078051

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
NMNM762228. Well Name and No.  
NEAL COM 2M9. API Well No.  
30-045-31890-00-X110. Field and Pool, or Exploratory  
BASIN DAKOTA  
BLANCO MESAVERDE11. County or Parish, and State  
SAN JUAN COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator  
BP AMERICA PRODUCTION COContact: MARY CORLEY  
E-Mail: corleyml@bp.com3a. Address  
P. O. BOX 3092  
HOUSTON, TX 772533b. Phone No. (include area code)  
Ph: 281.366.4491  
Fx: 281.366.0700

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 14 T31N R11W NWSE 2645FSL 1735FEL

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original APD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

APD submitted 09/11/2003.

Please note the following change in the location for the subject well:

Change location from: 2645' FSL & 1735' FEL Section 14, T31N, R11W  
to: 2655' FNL & 1740' FEL Section 14, T31N, R11W

Attached please find corrected Form C-102 and amended Drilling, Completion, and Cementing Procedures.

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #24758 verified by the BLM Well Information System  
For BP AMERICA PRODUCTION CO, sent to the Farmington  
Committed to AFMSS for processing by ADRIENNE GARCIA on 12/04/2003 (04AXG1815SE)**

Name (Printed/Typed) MARY CORLEY

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 11/05/2003

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <b>/s/ David J. Mankiewicz</b>	Title	DEC - 4 2003
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	Date

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

NMOC

**BP AMERICA PRODUCTION COMPANY  
DRILLING AND COMPLETION PROGRAM**

**Prospect Name:** Neal Com  
**Lease:** Neal  
**County:** San Juan  
**State:** New Mexico  
**Date:** July 31, 2003  
 Rev 10/20/03

**Well No:** 2M  
**Surface Location:** 14-31N-11W, 2655 FNL, 1740 FEL  
**Field:** Blanco Mesaverde/Basin Dakota

**OBJECTIVE:** Drill 220' below the top of the Two Wells; set 4 1/2" production casing. Drill out 110' below the 4 1/2" casing shoe, open-hole test and stimulate as required Burro Canyon (DK) interval. Stimulate CH, MF, PL and DK intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 5920		Estimated KB: 5934	
Rotary	0 - TD	MARKER		SUBSEA	MD.
<b>LOG PROGRAM</b>  <b>TYPE</b> <u>OPEN HOLE</u> GR-IND-DEN  <u>CASED HOLE</u> GR-CCL-TDT CBL  <b>REMARKS:</b> - Please report any flares (magnitude & duration).		Ojo Alamo		5008'	926'
		Kirkland		4906'	1028'
		Fruitland		3964'	1970'
		Fruitland Coal	*	3681'	2253'
		Pictured Cliffs	*	3346'	2589'
		Lewis Shale	#	3184'	2750'
		Cliff House	#	1842'	4092'
		Menefee Shale	#	1499'	4435'
		Point Lookout	#	1047'	4888'
		Mancos		769'	5165'
		Greenhorn		-955'	6889'
		Bentonite Marker		-999'	6933'
		Two Wells	#	-1056'	6990'
		Paguate	#	-1145'	7079'
		Cubero Upper	#	-1176'	7110'
		Cubero Lower	#	-1197'	7131'
		Encinal Canyon	#	-1231'	7165'
		Burro Canyon	#	-1286'	7220'
		TOTAL DEPTH		-1386'	7320'
		# Probable completion interval		* Possible Pay	
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		10'	2850' -TD	Geolograph	0-TD
REMARKS:					

MUD PROGRAM:					
Approx. Interval	Type Mud	Weight, #/ga	Vis, sec/qt	W/L cc's/30 min	Other Specification
0 - 120	Spud	8.6-9.2			
120 - 2850 (1)	Water/LSND	8.6-9.2		<6	
2850 - 7210	Gas/Air/N2/Mist	Volume sufficient to maintain a stable and clean wellbore			
7210 - 7320 (4)	Gas/Air/N2/Mist	Volume sufficient to maintain a stable and clean wellbore			

**REMARKS:**

(1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.

**CASING PROGRAM:** (Normally, tubular goods allocation letter specifies casing sizes to be used. Hole sizes will be governed by Contract)

Casing String	Estimated Depth	Casing Size	Grade	Weight	Hole Size	Landing Pt, Cmt, Etc.
Surface/Conductor	120	9 5/8"	H-40 ST&C	32#	13.5"	1
Intermediate 1	2850	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	7210	4 1/2"	J-55	11.6#	6.25"	3

**REMARKS:**

- (1) Circulate Cement to Surface
- (2) Set casing 100' into Lewis Shale
- (3) Bring cement 100' above 7" shoe
- (4) Drill lower Dakota section with Gas/Air/N2/Mist; open hole completion below 4 1/2" casing shoe

**CORING PROGRAM:**

None

**COMPLETION PROGRAM:**

Rigless, 3-4 Stage Limited Entry Hydraulic Frac

**GENERAL REMARKS:**

Notify BLM/NMOCD 24 hours prior to Spud; BOP testing, and Casing and Cementing.

Form 46 Reviewed by: \_\_\_\_\_ Logging program reviewed by: N/A

**PREPARED BY:** \_\_\_\_\_ **APPROVED:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

# BP America Production Company

## BOP Pressure Testing Requirements

Well Name: Neil Com  
County: San Juan

2M  
State: New Mexico

Formation	MD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	926		
Fruitland Coal	2253		
PC	2589		
Lewis Shale	2750		
Cliff House	4092	500	0
Menefee Shale	4435		
Point Lookout	4888	600	0
Mancos	5165		
Dakota	6990	2600	1449

\*\* Note: Determined using the following formula:  $ABHP - (.22 \times TVD) = ASP$

Requested BOP Pressure Test Exception: 1500 psi

**SAN JUAN BASIN**  
**Dakota Formation**  
**Pressure Control Equipment**

### Background

The objective Dakota formation maximum surface pressure is anticipated to be less than 1000 psi, based on shut-in surface pressures from adjacent wells. Pressure control equipment working pressure minimum requirements are therefore 2000 psi. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2000 psi system per Federal Onshore Order No. 2. Due to available conventional equipment within the area, 3000 psi rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rights to be utilized have substructure height limitations which exclude the use of annular preventers; therefore a rotating head will be installed above these rams. This pressure control equipment will be utilized for conventional drilling below conductor to total depth in the Basin Dakota. No abnormal temperature, pressure, or H<sub>2</sub>S anticipated.

### Equipment Specification

#### Interval

#### BOP Equipment

Below conductor casing to total depth 11" nominal or 7 1/16", 3000 psi  
double ram preventer with rotating head.

All ram type preventers and related control equipment will be hydraulically tested to 250 psi (low pressure) and 2000 psi (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock, upper kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

# Cementing Program

Well Name: Neil Com 2M  
 Location: 14-31N-11W, 2655 FNL, 1740 FEL  
 County: San Juan  
 State: New Mexico

Field: Blanco Mesaverde / Basin Dakota  
 API No.  
 Well Flac  
 Formation: Blanco Mesaverde/Basin Dakota  
 KB Elev (est) 5934  
 GL Elev. (est) 5920

## Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)	Cmt Cir. Out (bbl.)
Surface	120	13.5	9.625	ST&C	Surface	NA	
Intermediate	2859	8.75	7	LT&C	Surface	NA	
Production -	7230	6.25	4.5	ST&C	2759	NA	

## Casing Properties:

(No Safety Factor Included)

Casing String	Size (in.)	Weight (lb/ft)	Grade	Burst (psi.)	Collapse (psi.)	Joint St. (1000 lbs.)	Capacity (bbl/ft.)	Drift (in.)
Surface	9.625	32	H-40	3370	1400	254	0.0787	8.845
Intermediate	7	20	K-55	3740	2270	234	0.0405	6.456
Production -	4.5	11.6	J-55	5350	4960	154	0.0155	3.875

## Mud Program

Apex Interval (ft.)	Mud Type	Mud Weight	Recommended Mud Properties Prio Cementing:	
			PV	<20
			YP	<10
			Fluid Loss <15	
0 - SCP	Water/Spud	8.6-9.2		
SCP - ICP	Water/LSND	8.6-9.2		
ICP - ICP2	Gas/Air Mist	NA		
ICP2 - TD	LSND	8.6 - 9.2		

## Cementing Program:

	Surface	Intermediate	Production
Excess %, Lead	100	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	120	183
Special Instructions	1,6,7	1,6,8	2,4,6

1. Do not wash pumps and lines.
2. Wash pumps and lines.
3. Reverse out
4. Run Blend Test on Cement
5. Record Rate, Pressure, and Density on 3.5" disk
6. Confirm densitometer with pressurized mud scales
7. 1" cement to surface if cement is not circulated.
8. If cement is not circulated to surface, run temp. survey 10-12 hr. after landing plug.

## Notes:

\*Do not wash up on top of plug. Wash lines before displacing production cement job to minimize drillout.

## Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	110 sx Class G Cement		117 cuft
TOC@Surface	+ 3% CaCl2 (accelerator)		
	+ 0.25 #/sk Cellophane Flake (lost circulation additive)		0.4887 cuft/ft OH

## Slurry Properties:

	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

## Casing Equipment:

9-5/8", 8R, ST&C  
 1 Guide Shoe  
 1 Top Wooden Plug  
 1 Autofill insert float valve  
 Centralizers, 1 per joint except top joint  
 1 Stop Ring  
 1 Thread Lock Compound

# Cementing Program

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**Intermediate:**

Fresh Water	20 bbl	fresh water	
Lead		240 sx Class "G" Cement	610 cuft
Slurry 1		+ 3% D79 extender	
TOC@Surface		+1/4 #/sk. Cellophane Flake	
		+ 5 lb/sk Gilsonite	
Tail		60 sx 50/50 Class "G"/Poz	75 cuft
Slurry 2		+ 2% gel (extender)	
500 ft fill		+1/4 #/sk. Cellophane Flake	0.1503 cuft/ft OH
		+ 2% CaCl2 (accelerator)	0.1746 cuft/ft csg ann
		+ 5 lb/sk Gilsonite	

Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	11.4	2.63	15.8
Slurry 2	13.5	1.27	5.72

Casing Equipment: 7", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)  
 1 Float Collar (autofill with minimal LCM in mud)  
 1 Stop Ring  
 Centralizers one in middle of first joint, then every third collar  
 1 Top Rubber Plug  
 1 Thread Lock Compound

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**Production:**

Fresh Water	10 bbl	CW100	
Lead		190 LiteCrete D961 / D124 / D154	469 cuft
Slurry 1		+ 0.03 gps D47 antifoam	
TOC, 400' above 7" shoe		+ 0.5% D112 fluid loss	
		+ 0.11% D65 TIC	
Tail		160 sx 50/50 Class "G"/Poz	225 cuft
Slurry 2		+ 5% D20 gel (extender)	
1565 ft fill		+ 0.1% D46 antifoam	
		+ 1/4 #/sk. Cellophane Flake	
		+ 0.25% D167 Fluid Loss	
		+ 5 lb/sk Gilsonite	
		+0.1% d800, retarder	
		+0.15% D65, dispersant	
			0.1026 cuft/ft OH
Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	9.5	2.52	6.38
Slurry 2	13	1.44	6.5
			Top of Mancos
			5165

Casing Equipment:

4-1/2", 8R, ST&C  
 1 Float Shoe (autofill with minimal LCM in mud)  
 1 Float Collar (autofill with minimal LCM in mud)  
 1 Stop Ring  
 Centralizers, every 4th joint in mud drilled holes, none in air drilled holes.  
 1 Top Rubber Plug  
 1 Thread Lock Compound